

Appl. No. 10/763,137
Amdt. Dated September 16, 2005
Reply to Office Action of June 16, 2005

Attorney Docket No. 88519.0002
Customer No.: 26021

REMARKS

This application has been carefully reviewed in light of the Office Action dated June 16, 2005. Claims 1-12 remain in this application. Claims 1 and 7 are the independent Claims. It is believed that no new matter is involved in the amendments or arguments presented herein. Reconsideration of the application is respectfully requested.

Allowable Subject Matter

On page 3 of the Office Action, Claims 1-6 were allowed. Claims 8, 10, and 12 were indicated to be allowable if re-written to include all of the limitations of the base claim and any intervening claims.

Applicant thanks the Examiner and formally recognizes the allowable claims and allowable subject matter of Claims 8, 10, and 12.

Art-Based Rejections

Claims 7, 9, and 11 were rejected under 35 U.S.C. § 102(e) over U.S. Application No. 20020126719 A1 (Kadota). Applicant respectfully traverses the rejections and submits that the claims herein are patentable in light of the clarifying amendments above and the arguments below.

The Kadota Reference

Kadota is directed to a semiconductor photonic device, and more particularly to a semiconductor photonic device having a GaN-based layer as an active layer. (See, *Kadota*; Para. 2). According to Kadota, the semiconductor photonic device includes a substrate, a low resistance ZnO buffer layer disposed on the substrate, and a compound semiconductor layer formed on the ZnO buffer layer. The

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compound semiconductor layer is $In_xGa_yAl_zN$ where $x+y+z=1$, $0 \leq x \leq 1$, $0 \leq y \leq 1$, and $0 \leq z \leq 1$. (See, *Kadota*; Para 19; Figure 4).

The Claims are Patentable Over the Cited References

The present application is generally directed to a GaN system semiconductor light emitting device.

As defined by amended independent Claim 7, a semiconductor light emitting device has a light emission layer consisting of a GaN system semiconductor, which is interposed between a n type GaN system semiconductor layer and a p type GaN system semiconductor layer. A B-doped $Mg_zZn_{1-z}O$ ($0 \leq z < 1$) electrode film disposed on one of the GaN system semiconductor layers is provided.

The applied reference is not seen to disclose or suggest the above features of the present invention as defined by independent Claim 7. In particular, applied reference does not disclose or suggest, "a B-doped $Mg_zZn_{1-z}O$ ($0 \leq z < 1$) electrode film disposed on one of the GaN system semiconductor layers," as required by amended independent Claim 7.

Kadota discloses a ZnO buffer layer between the compound semiconductor layer and a substrate. (See, *Kadota*; Para. 19; Figures 1, 4, and 5). According to Kadota, a substrate is provided. The ZnO layer is disposed on the substrate. (See, *Kadota*; Para. 19). In contrast, the amended independent Claim 7 requires a MgZnO electrode film disposed on one of the GaN system layers to improve the light emission efficiency thereof and electric current diffusion thereto. (See, Specification; Figures 4 -6). In particular, the MgZnO electrode film is disposed on the p-type GaN system layer. (*id.*).

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Applicant respectfully submits a buffer layer between a substrate and the compound semiconductor layer, and more particularly a buffer layer disposed on the substrate, is not equivalent to an electrode film disposed on a GaN system semiconductor layer.

Accordingly, the applied reference does not teach or suggest the above features of the present invention as recited in the amended independent Claim 7.

Since the cited reference fails to disclose, teach or suggest the above features recited in the amended independent Claim 7, the reference cannot be said to anticipate or render obvious the invention which is the subject matter of the claim.

Accordingly, the amended independent Claim 7 is believed to be in condition for allowance and such allowance is respectfully requested.

Claims 9 and 11 depend directly from amended independent Claim 7, and recite additional features of the invention which are neither disclosed nor fairly suggested by the applied references and are therefore also believed to be in condition for allowance.

Conclusion

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6809 to discuss the steps necessary for placing the application in condition for allowance.

Appl. No. 10/763,187
Amdt. Dated September 16, 2005
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Attorney Docket No. 88519.0002
Customer No.: 26021

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,
HOGAN & HARTSON L.L.P.

Date: September 16, 2005

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